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THE ALASKAN PROBLEM

BY RALPH S. TARR

So much has been written about Alaska in the last year or two that it has been with considerable hesitation that I have ventured to enter the field. My apology for doing so is that, though having traveled widely in Alaska during four summers, I have absolutely no financial interest in it, never have had, and never expect to have. I can, therefore, approach the subject without the influence of personal interest; and no magazine or paper has sent me to Alaska for muck-raking purposes. My interest in the territory has been purely scientific, and I have viewed the country from the standpoint of its geography, which, of course, involves the human responses to environment. This may, perhaps, serve as sufficient excuse for my attempting an analysis of the Alaskan situation as it exists, an examination of the causes that have led to this situation, and, in the light of such a discussion, a consideration of the future.

As to the existing situation, it is no exaggeration to say that, whereas three years ago there was every reason to look forward to continued and rapid progress, now nearly everything is at a standstill. In places retrogression has replaced progress. The towns of Alaska, with hardly an exception, have lost population, and vacant houses and stores exist by the score. People are closing up business and leaving and there is general despondency, especially in the coastal portions, which have been looking forward to the impetus that should result from the building of railroads and the development of the coal-fields.

Alaska and Alaskans have been made the victims of a combination of stupid land laws, awakened public conscience, the clamor of the unreasoning mob, and politics. Since the very earliest days of our national existence the United States Government, one of the great land-owners of the world, has

been the consistent victim of the land-grabber, and the people have been delightfully indifferent to it, condoning the offense, if they thought of it at all, on the theory that there was plenty for all and that the country was being "developed." With a lack of wisdom that seems almost inexplicable, land laws were passed that were wholly inadequate to the needs of the western country and that very often could be made useful only by evasion. A cattleman could neither buy land for his range nor lease it; he could only have it given to him in small parcels. So with irrigable lands; until Newell's broadly intelligent methods were employed our Government was in the position of an owner of land and water with potential value that it would neither develop itself nor allow any one else to develop. The forest lands of western Washington could neither be purchased nor leased in sufficient quantity to permit lumbering operations. Who would think of starting a lumber-mill on the basis of ownership of a few score acres of timber land? Some have said that the people interested should have seen to it that new and better laws were passed. How easy that sounds! How simple it would be to interest and secure the vote of the Senator from Maine or Louisiana!

The stupidity of our land laws has forced men either to evade them or else to get out of the country; and the laxness of our execution of these laws has encouraged evasion until it has come to be generally believed that such evasion is not only necessary, but right. Location for others by power of attorney, location of adjacent lands by friends and relatives, perhaps with the object of ultimate combination, have been so common and have been passed upon favorably so often and so long that people have looked upon such methods of obtaining control of land as a matter of course. Thus the land has been secured, the country has been "developed," and fortunes have been made out of it, while the Government has not received enough direct return to pay the expenses of the land transfer.

Alaska had begun to be developed under the influence of this system. Land laws wholly inadequate have been in vogue there. People who have never visited the territory have had gold, coal, and other claims located for them. Group locations have been made, sometimes pre-empting the placer gravels of an entire creek or an entire hillside supposed to contain gold-bearing quartz. If such methods of

location have been deemed necessary and correct in gold location, how much more so is it in the case of coal? Who would think of locating a small patch of coal land in Alaska with the expectation of working it? Yet the Government will neither sell, lease, nor give away enough land to make a coal-mine possible.

Combination is the only visible solution, and combination under Government land laws has been practised for so long a time that it has been considered to bear the stamp of Government approval. Is it correct for a man with power of attorney to locate for his brother or friend or for two or a dozen friends? If so, can there be a written agreement to combine interests? Or a tacit agreement? Or a combination after location? To this day the prospector does not know exactly what is permitted under the law either with reference to coal location or gold claims.

The greater number of locations have been made in good faith and in the light that the prospector had concerning land laws. There is no class of men who are more frank or honest in their dealings than these brave, hardy men. They wish to live up to the law, and the vast majority of them have thought they were doing so and still think so. They feel aggrieved. Granting that some have been deliberately fraudulent and that others have been guilty of evading the law with or without realizing it, there remain others who have done no wrong either intentional or unintentional; and yet these are suffering equally with the most guilty as a result of our hasty, unconsidered action. Men who have spent ten or a dozen years of the best period of their lives, discovering and proving the value of these coal-beds, buoyed by the hope and expectation of ultimately reaping a return either for themselves or their families, find their hopes dashed, their energies wasted, and their time and money gone to no purpose. No, not that, for they have discovered, developed, and proved the value of these "priceless possessions of the sovereign people of the United States." Their reward is abuse and the brand of "thief." It is not right, and no action of the United States Government will be right, that does not involve adequate compensation for these pioneers.

Out of our long period of lethargy there has come an awakening, and the public mind has been fired with the word "conservation." We will no longer leave the stable-door

open, even though most of the horses are gone. Hail to conservation, I say, even though it has come a full half-century after it should. But let us fully understand what it means, and before applying it let us devise some way in which it can be made workable and effective, and certainly let us see to it that it does not become an instrument of obstruction and destruction. There is danger lest it become a quack medicine that will kill and maim instead of being the cure-all it is proclaimed to be. Even continued exploitation may be preferable to unwise conservation. In Alaska it has so far checked progress, and no immediate prospect of relief is in sight; in the mean time the resources are being effectually "preserved for the future."

It happens that the conservation movement has been essentially contemporaneous with the hue and cry against corporations; and one of these bogies opportunely appeared in the Alaskan field. A great "corporation octopus" settled down on Alaska and its tentacles spread out to the rich and extensive copper deposits of the interior (but the public does not know much about that), and out toward the Controller Bay coal-fields, about which the public has been given a vast amount of exaggerated misinformation. "Alaska in the grasp of a monopoly, its resources pre-empted, the public despoiled of its valuable possessions": this has been a good rallying-cry at a time when "trust-busting" is a popular hobby. In the effort to checkmate the designing syndicate in its move toward the coal-fields the western idea of how to develop new countries clashed with the newly-born eastern ideals of conservation, which, rightly or wrongly, are commonly believed in the west and in Alaska to be ill-judged, impractical, and academic. Then the public was treated to one of the most bitter of political rows, which in some of its aspects bordered on the disreputable. Conservation won, the corporation was halted, and Alaskan progress was checked; for how long a time and how effectually only the future can prove. The only good that has come to Alaska so far has been a wide advertisement, as a result of which people have at last learned something about it; but they have also been told many things that are not so.

Muck-raking and politics have played so large a part in the Alaskan controversy that it is a question whether the public has been given a fair view of the facts in the case of the corporation octopus. The corporation has discreetly

kept quiet, for now is not the time for a corporation to defend itself. I must confess that I do not know the facts concerning the Morgan-Guggenheim syndicate and its operations; for I have not the honor of acquaintance with any of the principals, and I have no means of gaining and have made no attempt to gain exact information concerning either their motives or their plans. Such facts as I do possess leave me to take, on the whole, a rather favorable and charitable view of this syndicate and to seriously raise the question whether it has had a "square deal"; and I wish to state this view as a possible alternate hypothesis to the theory that it is composed of diabolical schemers whom it is the duty of every true citizen to fight and crush.

In new countries it is commonly recognized that effective development demands the expenditure of large sums of money. It is common in such countries to grant concessions to *induce* capital to provide the facilities for adequate development, and the concessions to syndicates often include valuable rights. Even in our own country this custom has been followed in the case of certain railways; and had it not been possible to secure rights indirectly, and perhaps even fraudulently, the history of development and expansion of our western country would have been far less spectacular than it has been. At a time when most citizens of the United States thought of Alaska as an ice-bound land with a few golden streaks in it, the Morgan-Guggenheim syndicate had the keen business foresight to see that Alaskan copper was a valuable asset, provided it could be brought out to the coast; and it is quite probable that it also fully realized the value and significance of the coal deposits. It proceeded to secure and invest millions of dollars in providing the necessary transportation facilities from the copper-mines, building the Copper River Railway, one of the most remarkable and difficult pieces of railway construction in the world.

It has only recently become a sin for a syndicate to open up a country, and it was not a recognized sin when this particular scheme was financed and begun. It is quite conceivable that the Morgan-Guggenheim syndicate was actuated by perfectly honorable motives in its plans to provide for the development of the Copper River region, and that it expected its profit to come from mineral deposits which its financial genius made of value and by methods in no way

different from those that have been in vogue for a century in this country. If the corporation has been guilty of fraud it certainly should be prosecuted, and one could not object even to confiscation of its fraudulently acquired property; but the public clamor has been solely that this great octopus is proceeding to devour the Alaskan riches. If this is all that it has been guilty of, then it is being seriously and unjustly punished; for it has invested money which, by a sudden and unannounced change in governmental policy, threatens to be a loss.

For the ultimate benefit of the people as a whole temporary retardation of progress may be justified and even injustice to individuals and corporations excused. It is my belief that ultimate good may, by the exercise of wisdom, yet develop out of the Alaskan situation. If only we can quiet the muck-raker and remove politics from the problems, giving candid consideration less to past mistakes than to future benefits, we may accomplish in Alaska such results as to teach us how mistaken our previous land policy has been. Perhaps in the settlement of the problem finally reached the injustice to individuals can be rectified and even the hated corporation be treated fairly. The plans should, however, soon be formulated so as to avoid unnecessary retardation of development, though even delay is preferable to crude experiment or to inadequate or ill-considered expedients. A definite, broadly formulated plan is needed, and the sooner it is put into operation the better for Alaska and for the country. The key-note to this plan should be rational conservation, which, while checking exploitation, should encourage development. It should include a revision of the land laws, not merely with reference to coal locations, but to correct other evils of location against which the miners justly complain; and it must provide for adequate transportation facilities.

Upon the question of the land laws I do not wish to dwell, for in large part this is but a mere question of detail calling only for honest, intelligent study and decision in the light of experience, of which there is a sufficient body to serve as a guide toward wise revision. With the coal lands, however, a new question arises, and it seems to be quite generally agreed by disinterested persons who have knowledge of the subject that the leasing system is the one of best promise. Any leasing system which is to be successful must give

opportunity for distinct profit. A mere five or six per cent. on the invested capital is not sufficient inducement for operation in that country. There are difficulties, both climatic and physiographic, with which the eastern legislator and even the eastern engineer has no acquaintance. Operation costs will be high, dangers of loss will be heavy, the market is remote and as yet undeveloped, and the compensation expected for industry in a new, undeveloped country is necessarily higher than in the older regions. All these points must be considered in reaching a wise plan for a system of leasing.

No system of leasing or any other reform in the land laws will be of avail unless in connection with it there is provision for transportation; and this presents a problem of fundamental importance and one in the solution of which no mistake should be made. For adequate development a broadly planned and boldly executed *system* of railways is needed. To talk of solving the Alaskan problem by running a short railway from the Controller Bay coal-fields to the shores of Controller Bay is childish for two reasons. In the first place, the mere fact that Controller Bay is the water body nearest the coal is not necessarily proof that it is the proper port. If the Morgan-Guggenheim people have the normal amount of humor, they must have chuckled at the public clamor over the "gobbling up" of the Controller Bay coast, for they, the first to really occupy the field, already *have* their railway terminal on a *good*, protected harbor at Cordova, not on Controller Bay at all, but on a branch of Prince William Sound. From some of the writings and editorials on this phase of the subject it looks as if the writers might have had in mind Boston Bay and the Charles and Mystic rivers as the counterparts of Controller Bay, the Copper and Bering rivers.

Not only must the railway terminal be wisely selected, but, in the second place, the railway system must be adequate. To run a short line to the coal-fields is only a partial and wholly inadequate solution of the Alaskan problem. It may be true that this is all that is needed to bring the coal out for shipment to the outside; but to provide for the use of the coal in the development of Alaska such a road should be merely a part of a system of railways, growing as the demand arises. Without provision for additional railroads Alaska is to be merely exploited and robbed of its coal. The Morgan-Guggenheim syndicate has indicated the truth of

this, for at great expense it has run a railway completely across the coastal mountains; and further extension, either to the coal-fields or into the interior, was henceforward simple and doubtless in contemplation. It has made the beginning of a broad-gauge scheme for an Alaskan railway system; and seeing the problem in its larger bearings and relationships, and having broad business experience, it laid its basal plans wisely and with keen foresight. The Government cannot properly be a party to any scheme less wisely planned.

It is my conviction that an adequate system of railway transportation from the coast to the interior of Alaska is demanded to develop the coal-fields, to open up undeveloped mineral-fields, and to connect interior mineral districts on the Yukon and its tributaries with the coast. That there is this need and that it promised profit, if all went well, is proved by the fact that a private concern entered upon its execution in a *bona fide* manner, while numerous other concerns made more or less ineffectual attempts to carry out a similar plan from Katalla, Valdez, and Seward.

The United States is the owner of a vast area of practically undeveloped Alaskan land with great future possibilities, but at present held in check because of the lack of means of access and transportation. If it were an individual, instead of our Government, that owned such valuable property, he would either provide the transportation himself or make it possible for some one else to do so with an arrangement profitable to both. I fail to see wherein the interests of the people of the United States differ materially from those of an individual in this respect. The fact that the United States Government has brought to a standstill the effort of a private concern to provide the needed transportation indicates either that the nation is to undertake the work itself or that it is not to be done at all.

The reasons favoring Government construction of Alaskan railways are as follows: (1) The land belongs to the United States, and the nation has the greatest interest in rendering it valuable and profitable to individuals and to the people as a whole. (2) The region is one that can never be densely settled and that for a long time to come may be expected to be occupied only in spots, and primarily by a mining population. Railroad-building cannot, therefore, be undertaken by private capital in anticipation of the rapid

extension of a permanent population, as has been done in parts of the United States. (3) Private capital invested in railway properties here must look for quick and abundant profits, and at present these are in sight only in returns from mines owned or controlled by the railways, against which the Government is now opposed.

The United States, on the other hand, can look at the problem from an entirely different point of view, for to it a few years, or even a generation, is an insignificant period of time. Being the owner of the land, it could be content to wait for direct profits from the investment if by it the value of the land is increased and if the requisite settlement and development are made possible. At no time need the Government demand the high rate of interest on the investment that private investors in a new country require. Returns from leases—and leases on gold, copper, and silver prospects, as well as coal, would be preferable to the present system—and growing returns from railway rates would ultimately yield adequate profit if the generally accepted views of Alaska's mineral wealth, in which I concur, are correct. There need never be a period of exorbitant rates; progressive development may be expected; and with wise land laws conservation may at last begin to be really tried out in American territory.

Of course the cry of Socialism is raised against the scheme of Government ownership of railways; but, even granting the claim of the most extreme anti-Socialist against the evil of the system as a whole, it is to be noted that there is here a special case quite different in all its basal principles from the general principle of Government ownership of railways. For the Government to take up and run the railways of the United States would be to substitute one kind of ownership and control for another, on the theory that the new way was the better. In the Alaskan case there is no railway system—only beginnings already checked; and there is no apparent chance of one by private initiative excepting on the basis either of exploitation or of valuable Government concession. The latter is a form of paternalism which we ought to be thankful is passing or past. Neither exploitation nor Government concession ought to be permitted, and the alternatives are either to permit valuable resources to lie idle or for the nation itself to take an interest in its own property and provide for its development.

If this were an altogether novel scheme one might hesitate about the wisdom of undertaking it; and it must be confessed that when one sees how badly we manage our postal system, as compared with other Great Powers, there is reason to fear a new experiment in extensive governmental control of public utilities. On the other hand, we fortunately can look with the greatest pride upon other and more nearly analogous experiments in governmental control, and, with a hopeful spirit, may trust that equally honest, efficient, and energetic methods may prevail in governmental railway control and leasing systems in Alaska. These are our Government experiment in the Panama Canal zone, one of the greatest national triumphs of governmental management the world has ever seen, and also the less well-known governmental experiment in the arid lands which Frederick H. Newell has been conducting with such remarkable efficiency and success. There the Government is acting as a wise steward of its properties and doing what it can to make them valuable and useful even at the expenditure of vast sums of money. Here is a case quite closely analogous to that in Alaska, substituting dams and ditches for railways, and desert land for mineral deposits; and here, as it is to be hoped may be the case in Alaska, great good is being done to individuals and to the nation; and it is done efficiently, honestly, and without scandal. Conservation of the highest type is being practised—that is, the development of opportunity to increase production by making the highest possible use of the existing resources without exploitation.

As a matter of fact, the United States is, and for a number of years has been, engaged in the business of providing transportation facilities in Alaska, inadequate, to be sure, and far inferior to what Canada has been doing in the neighboring mineral regions of Yukon territory. Our Government has been expending money in the building of both trails and roads in order to facilitate access to mineral lands and to provide routes for the carriage of mail. We have already recognized the principle of governmental provision of transportation facilities in Alaska, the natural extension of which is the construction of railways where most needed.

With rational land laws, with adequate facilities for transportation, with suitable provision for conservation of resources, and with the development that may be expected to follow, what is it reasonable to infer as to the future of

Alaska? Whatever is said in this connection is necessarily in the nature of prophecy, and therefore liable to error.

One of the great resources, as yet only inadequately developed and imperfectly known, is the natural scenery. The Inside Passage, with its maze of branches, rivals Norway; its glaciers and mountain scenery far excel the Alps in grandeur; the Yukon trip is one of the great river voyages of the world; and the cross-country journey from the Yukon to the sea is one of the most attractive inland journeys on the continent. As yet only a mere fraction of this scenery is accessible with moderate comfort, and most of the best and grandest is wholly inaccessible to the casual traveler. To him who may scoff at the idea of treating scenery as a resource I need refer only to Switzerland; for, as scenery is one of the great natural resources of Switzerland to-day, so it may come to be the case in Alaska in the future. But as a first essential must come means of safely getting there and opportunities for comfort while remaining there. With good steamship lines, with a properly lighted coast, and with a railway connecting the coast and the interior rivers, there will certainly come a stream of travelers, sportsmen, and rest-seekers.

The fisheries of the coast have already developed to a remarkable extent, for here transportation is simple, cheap, and easy to provide. The salmon fisheries have, perhaps, been allowed to develop too fully, as has certainly been the case with the fur-seal and the sea-otter fisheries. Here is apparently opportunity for conservation by further restriction.

The timber resources of Alaska have not been developed at all, the laws prohibiting exportation, and the local use being only of the most limited nature. Alaskans complain bitterly of the obstructive effect of conservation of the forest resources; and it certainly is difficult to see the justice of a policy of restriction and taxation which renders it cheaper to bring wood up from Seattle than to cut it from the near-by forest. To prevent the wasting of the forest and to avoid the disaster of removing timber that the next generation of Alaskans may find a necessity are, of course, praiseworthy objects; but there are sections where there is so much timber that it would surely be sound policy to cut away a considerable area each year with the assurance that with regrowth a sufficient area of timber would be constantly preserved. With

the German type of forest conservation that encourages use, there is high probability that the timber of Alaska, both in the interior and along the coast, may be safely made to yield a moderate supply of lumber and pulp for export and still leave all that is needed at home. If this conclusion is correct, a continuation of prohibitive conservation is mere stupidity.

Agriculture, normally the basal industry of a country, can hardly be looked upon in this light in viewing Alaska's future. Along the Pacific coast there is no reason why crops should not be raised as freely as in Scandinavia wherever there is suitable soil. The limitations here are not climatic, but physiographic, though it must be noted that there is an excess of precipitation. The difficulty is the limited amount of land sufficiently level, or with sufficiently deep soil, for agriculture. But there are many suitable tracts, and we may fairly look forward to a time, perhaps not very distant, when the coast will be dotted with farms and the hill-slopes cleared for pasture and no longer a uniform stretch of forest wilderness.

In the interior there is an abundance of level land, but the season is so short and frosts are of such frequent occurrence that only hardy crops can be raised in the open; and much of the soil is swampy tundra that in places cannot be economically drained. However, even now one can see as far north as the Arctic Circle flourishing fields of oats, potatoes, cabbages, and hardy fruits and vegetables, though in most cases these are raised merely as a side issue by men whose main occupation is something quite different. These fields prove conclusively the possibilities; and there is certainly the further possibility of successful raising of domestic animals, for the pasture lands are extensive.

With these facts in mind it is a reasonably safe conclusion that the development of agriculture will proceed with the opening up and development of the country. Grant industries that call in a population of sufficient permanence to warrant serious effort to provide food for them, and undoubtedly agriculturists will be found to make the attempt to raise and sell such products as are capable of being produced—namely, some of the main food staples. It does not seem possible that agriculture will lead the way, for the farm crops in such a climate, especially in the interior, can hardly do more than barely support life in the absence of a market for surplus products; nor is it probable that even

with extensive opening-up of the country the farm products will ever equal in value the products of the mines.

Finally, among Alaskan resources, are the minerals, the chief element in the whole situation, and the immediate excuse for the Alaskan agitation. Up to the present time, if we exclude the gold, the mineral output of Alaska is quite negligible. This is not due to absence of other minerals, but primarily to the undeveloped state of the region, to the lack of capital, to the absence of transportation facilities, and to the remoteness of markets. Prospectors have been looking for quick return, and they have sought it in the precious metal, gold, and in those deposits of it which required least capital—of which they have had little or none—and which have promised the greatest return for the time and money expended. These deposits have naturally been the placer deposits—"the poor man's mine"—out of which a man without capital or mining skill might hope to reap a fortune.

Thus we have witnessed the spectacle of a horde of men rushing to the Klondike, then to Nome, then to the Fairbanks district, then to the Iditaroid; and where they will go next season remains to be seen. In the mean time, Dawson has grown and declined, Nome has followed in the same path, Fairbanks is already beginning to decline, and scores of smaller places have come and gone. The population has shifted nervously about, almost a nomadic people, coming in great numbers in summer, and, if the money permits, going "Outside" in winter. Only a limited permanent population has developed, and thus, in spite of the great output of gold, the population has increased less than a thousand in the decade between 1900 and 1910.

Viewed superficially, this fact might seem indicative of the unwisdom of investing money in the effort to develop the territory; but such a conclusion does not necessarily follow from the facts. In the development of the New World, it has been the common preliminary stage for it to be first occupied by a more or less restless body of forerunners who have sought to pick up such treasure as is to be easily had. Later agriculture, mining, and other stable industries have developed and the population has grown. But in the United States proper this growth has in most parts been favored by the climate and quickly supported by the incoming of capital and the development of transportation. Alaska has not as yet induced a very consid-

erable number of agriculturists to settle, the double obstacle of remoteness and adverse climate being present in addition to the lack of a stable local market. The risks attendant upon investment in a new, remote, undeveloped country, plus the general ignorance and misconception regarding the Alaskan climate, have served to check the investment of capital in mining and transportation; and now to this is added governmental interference with the one concern that promised the needed capital.

To these factors is to be added the nature of the prospector's interest and desire. Seeking quick return with little or no capital, he searches the gravel deposits and he develops a certain skill in this phase of mining; but the mineral veins in the rock are of much less interest to him because this kind of mining lies outside his experience, it requires a greater expenditure of capital than he possesses, and a failure after exploration is a far more serious matter than a failure in placer exploration. Furthermore, seeking quick returns and being accustomed to seeing it gained in the placer mines, he expects it also from a mineral vein, if by chance he discovers one; consequently, he is apt to hold his improved "prospect" at so high and prohibitive a figure that no one but a natural gambler will buy it or take part in its development.

To-day mining in Alaska may be said to be essentially in the placer gold stage. About three-quarters of the gold is from this source, and the output of other minerals is so small that, with the exception of a few million pounds of copper, it may be neglected. Yet I have no doubt that there are to-day in Alaska a thousand bed-rock mines of gold, silver, and copper which the owners thoroughly believe to be valuable and which are awaiting either purchase or capital for development. In all probability a very large proportion of these prospects will prove to be of little or no value, but among them doubtless will be found other Treadwell or Cliff gold-mines and other Latouche or Bonanza copper-mines. Some of the mine prospects are along the coast, some just back from it, and some far in the interior and so remote from transportation routes that supplies must be drawn in on pack-horses or dog-sleds, while such labor as is employed must be imported and a wage of ten dollars paid for a day's work.

There are too many of these prospects for all of them

to be failures, but no one can say positively which will be the successful ones until further development work is done; and this calls for capital, which will not come without promise of means of transportation. Lack of transportation facilities is retarding preliminary exploration for prospects, development of prospects discovered, and shipment from mines already capable of producing.

One of the most venturesome kinds of prophecy is that dealing with the value of a mineral vein upon which little exploratory work has been done; but one is justified in going so far as to say that there is every reason for believing that at widely scattered points in Alaska the more stable bed-rock mining of gold is on the point of succeeding the placer mining, though that does not mean that placer mining is in danger of becoming extinct. It also seems safe to predict the development of a series of valuable copper mines whenever transportation becomes possible. When such a mine is developed, proved, and capable of shipping ore profitably, it means that a community will develop around it even though far within the Arctic Zone; that freight will come and go; and that other industries will develop, including agriculture, if that be possible in the neighborhood. What a single mineral district may be expected to do toward encouraging settlement finds illustration in the Calumet-Hecla region of Michigan, the Butte region of Montana, and in Alaska in the Treadwell-Juneau district.

If mines of gold, copper, silver, lead, and other minerals are developed, fuel is, of course, of great importance for use in mining, transportation, smelting, and in the houses of the workers. As every one now knows, Alaska has coal of excellent quality and in large quantity, though there is apparently an exaggerated notion abroad as to its extent. Coal is widely scattered, but much of it is of so poor a quality, or so far to one side of the regions of greatest promise in mineral development, that it does not seem likely to be of any great value in the immediate future. But in the Matanuska and Controller Bay fields there are such quantities of good coal as to thoroughly warrant the necessary expenditure for its development for shipment and for local use. This development will lead to settlement in the coal-fields and at the terminals, and it will make possible certain forms of manufacturing, notably the reduction of ores. The extent to which these results are

attained will depend in large part upon the wisdom with which transportation is provided and mine development encouraged, not only in the coal-fields, but in the other great mineral belts.

If this analysis of the situation is correct in its main principles, there is reason to hope for the growth of a series of industries in Alaska, of which the most important will be the mining industries; and with their growth there will naturally develop a stable population, increasing with the development of industry and broadening in its field of activity as time goes on. The one underlying need to make this possible, assuming that the belief in the mineral wealth of Alaska is correct, is the provision of transportation. Without it, as at present, only the richest deposits can be worked and these only at very great and wasteful expense, while truly valuable deposits will continue to remain untouched. As a land-owner the United States cannot afford to allow these deposits to remain useless, and either private enterprise should be encouraged to furnish necessary transportation facilities or else the Government itself should provide them. Of the two plans the latter would seem to be far the wiser and to promise the best results with the greatest economy.

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